Interview with the Expert is a regular column in which experts from a wide range of areas are invited by the editor to share their perspectives on music education. The experts are asked to be candid and unreserved in their writing. For this inaugural column, I've invited Dr. Jason Nolan, a STEAM educator and prolific researcher in a wide range of areas pertaining to technologies to support children's sensory learning and design for disabled children. Dr. Nolan will talk about his experiences with sound, music, and music education as an autistic child, youth and adult. In particular, he will discuss how these experiences have shaped his thinking about music education and learning about sound as a missing modality in children's educational experiences.

(Self)Interview with an Autistic: Intrinsic Interest and Learning With and About Music and the Missing Modality of Sound

(Auto-)entretien avec un autiste : intérêt intrinsèque, apprentissage de et par la musique, et la modalité sonore manquante

Jason Nolan

Abstract: I am an autistic educator who educates non-autistic learners. My earliest experiences with music was as an external sound source; a record player. Music was physical and required a physical response, and I would run in circles or bounce and conduct. Music in school was nothing like that. Music was teacher directed; programmed to institutional norms, based on the goals, interests and needs of adults. It was not about helping children learn about something they are growing passionate about. If this is not the goal of teaching, what is the goal? Luckily for me, my intrinsic interest and motivation in creating sounds and music was strong enough that I worked to create situations for sound and music beyond organized music institutions. This article starts by situating myself as the autistic child working against the hegemonic influences of the educational institution; later as a youth forging a path that would lead to becoming an educator conceptualizing alternative ways of knowing about sound and music. It concludes with a provisional framework that challenges how we work with learners that attempts to work within the lenses of equity, diversity and inclusion to bring learning about sound and music to the widest possible number of children.

Résumé: Je suis un éducateur autiste qui enseigne à des apprenants non autistes. Mes premières expériences avec la musique viennent d'une source sonore externe : un tourne-disque. La musique était pour moi physique et suscitait une réaction physique, alors je tournais, je bondissais et je la dirigeais. La musique à l'école n'avait rien à voir avec tout cela. La musique était dirigée par les enseignants, structurée selon des normes institutionnelles, puis basée sur les objectifs, les intérêts et les besoins des adultes. Il ne s'agissait pas de guider les enfants à apprendre quelque chose qui pourrait devenir une passion. Si ce n'est pas le but de l'enseignement, quel est le but? Heureusement pour moi, mon intérêt et ma motivation intrinsèques à créer des sons et de la musique étaient suffisamment forts pour que j'y consacre du temps en dehors des institutions musicales conventionnelles. Cet article débute par une présentation de moi-même, d'abord en tant qu'enfant autiste qui tente de contrer les influences hégémoniques de l'institution scolaire, puis en tant que jeune qui se trace progressivement un chemin pour devenir un éducateur qui conceptualise des manières alternatives de comprendre le son et la musique. L'article se termine par un cadre provisoire qui remet en question nos méthodes avec les apprenants, essayant plutôt de travailler dans une optique d'équité, de diversité et d'inclusion afin de rendre l'apprentissage du son et de la musique accessible au plus grand nombre d'enfants possible.

I am an autistic adult in my late 50s with an intrinsic interest in sound and music, and learning that predates my kindergarten experiences with music education. At present, I am a professor of Early Childhood Studies at Ryerson University where I teach a required course that explores sound and learning based both on my own practices and research and what early childhood educators will be expected to perform in the early years classroom. Few of our students have any experience with music or sound and learning beyond what they have experienced in their own schooling. I have no academic training in music education whatsoever though I co-teach this program with a well-respected music educator with prestigious credentials.

Teaching music should be about helping the children learn about something they are growing passionate about. If this is not the goal of teaching, what is the goal?

My academic areas of expertise are in the area of curriculum and pedagogy of informal learning environments, including online and virtual learning environments, STEM learning, and informal and unstructured play (Nolan & McBride, 2014). My present research includes design for disabled children (Bellucci, Nolan & Di Santo, 2019), learning with sound (Thumlert & Nolan, 2019) and the design and creation of tools to help children explore sound as a missing modality in their learning and lived experience, primarily using electronic music technologies. I am co-director of the Responsive Ecologies Lab at Ryerson University where these and other projects are developed and explored.

I am an autistic educator who educates non-autistic learners. Autistics often refer to the non-autistics as neurotypicals (NT). This can be seen as a somewhat pejorative term, but no more so than when NTs call people autistic in a similarly pejorative manner. It serves as an acknowledgement and a reminder that autistics are not only a marginalized social group who are surveilled, 'managed', even institutionalized and policed, but we are also people who are watching back at you. Watching the watchers; something we have come to know as sousveillance (Mann, Nolan & Wellman, 2018). Reading this article may make most sense if seen from this perspective. An autistic perspective, though not a canonical one. Each autistic person is as different as any neurotypical, probably more so. 'If you've met one autistic, you've only met one autistic.' However, more often than not we share a distance from NT notions of social interaction, what is interesting or important to us, how we feel most comfortable in engaging with the world and expressing ourselves. Keeping that in mind, I have chosen to keep my autistic voice as unmediated by the social norms, especially of written communication, that I have learned to adopt to forge a connection between myself and others. I usually struggle to write as close to NT norms and expectations as possible—otherwise I would get few grants and even fewer papers accepted for publication—but with the encouragement of my colleague, Charlene Ryan, who edits this journal, we decided to keep things as close as possible to the woof and warp of text (not to mention word choices) that flow from my fingertips. This has been written pretty much from beginning to end without rethinking or moving things around; only to add a sentence or two here and there to add in understanding; like this sentence here.

My earliest experience with music was as an external sound source: the AM radio playing 60s pop. Coming from a working class background, classical music was limited to the *Reader's Digest's Festival of Light Classical Music* (1961) from which only the bombast of Hungarian Rhapsody No. 2, Die Walkure, 1812 Overture, Pomp And Circumstance March No. 1, Night On The Bare Mountain, and the William Tell Overture could capture my attention, and I would run in circles or bounce and conduct. Music was physical and required a physical response.

Music in school was nothing like that. Music was teacher directed. It was programmed according to institutional norms, and primarily based on the goals, interests and needs of adults. I should say entirely. We were taught to sing songs at various points, and play the recorder from grade 1. I cannot remember any more than that. It was not music, any more than the stultifying experiences with letters or numbers were the poetry one learns to appreciate in them over time. Education is, after all, something adults choose to impose on children, ostensibly for their own good, not something any child chooses for themselves, or not until they have been sufficiently inculcated through admonishments and enticements. By high school I was able to intentionally enroll in a music class. I was assigned an instrument and told I could not change it. It was the trombone. We never got along well. Part of my autism is a lack of fine motor skills and coordination. I could never work with an instrument that required precision, whether it was a trombone or a pen. That said, I likewise could never sit there and pay attention to someone, waiting to be told what to do, and then act on that direction. Observation of any autistic will reveal that we can sit quietly engaged in tasks, or constantly be in motion, but you will rarely see an untrained (or rather, untherapied) autistic sitting patiently waiting for instruction. But the desire to play and learn to read music was there. So much so that after finishing grade 9, I chose to go to summer school and repeat grade 9 music so that I could switch instruments. I wanted to play tenor saxophone, and was able to rent my own. I still have it, though I have not played it in decades. It turned out that I cannot read music. I understand theory well enough but my problem with fine motor skills includes reading letters and notes. They just jump around on the page. Music class was a humiliating experience, and I was relegated to 4th Saxophone, even though we only had two saxophone players in our school. I only had to play the whole notes, and could usually guess what notes would work. I was clearly the worst student in class, yet tenacious. Just what I have come to see as a common autistic trait. And I was uninterested in performance, as much as I was interested in making the sounds, finding new ways of making sounds, and I was always learning things… usually when the teacher

wanted us to be quiet and conform to the normalizing expectations of the 'music class'.

I now know why the saxophone appealed to me. It had the bombast of that music I heard as a child from that 'light' classical music. It could growl and shout, just as I did when I got emotional. And it was the only instrument that made sense to my fidgety fingers. You see, the fingering on the saxophone always kept you in the same place. I lack the coordination, fine motor skills and muscle memory for an instrument that required much movement like the trombone, but also drums or guitars. Any educator who takes the time to observe young people, how they move and what they are drawn to can, along with a bit of inquiry, probably do a much better job in helping a child find the right instrument for them, particularly in opposition to choosing *for* a child based on preconceived ideas of what is right for the child or institutional factors such as the number of any particular instrument or the need to ensure that a school music class had the standardized mix of instruments in a class. I can imagine that an entire class of 'tweens all playing tenor saxophone would seem out of place to many music educators (though not all), but for me, that would make sense if I had a room full of them who 'just had to play the sax'. I smile thinking of how much fun that could be for the teacher, to rethink everything about a course just to accommodate such a class. And why not? Teaching music should be about helping the children learn about something they are growing passionate about. If this is not the goal of teaching, what *is* the goal? It is a question I often ask my students. Teaching is certainly not intended to be about inculcating children to the norms and expectations of adults and the institutions into which they themselves were enculturated; though it has become that ever since Joseph Lancaster, in the early 19th Century, started to classify poor and marginalized children into groups, with desks facing front, and impose on them the norms of the new industrialized culture, as an act of embourgeoisement (Crain, 2003). Anyway, the combination of factors particular to me got me into class playing saxophone, even if I had to rent my own instrument in order to do so, when everyone else in the class was provided an instrument by the school. I have always had to do a lot of extra work in order to ensure my interests and needs were accommodated. Even then.

From therapy to restraints, autistics are policed into compliance, rewarded when they act normally or punished when they act abnormal. That is, they are rewarded when they act like 'normal' children and punished when they do not. They are punished for 'acting autistic'.

Two years later, I bought a bass guitar, and by seventeen I had formed a band. The bass is a very forgiving instrument, or it was in the 70s when punk made accuracy less important than enthusiasm. Jumping up and down with joy while playing leaves little room for accuracy. And from that realization, I have focused on music and instruments that actually fit me, rather than try to fit myself to the instrument. And the bass fit better than the sax as I grew up. It met some of the criteria that the sax did. Bass players' fingers may move around more in your world, but in mine they did not. And I did not have to read music to play it. Realizing that you could make your own music, based on where you chose to move your own fingers, *when* you chose to move them—this was another revelation. Something that could and should have been taught to me as a child curious about music. I do not think, however, that it was ever in the mind of any of my music teachers.

Playing a musical instrument is about a person learning about themselves through the interaction with an external object. An object that happens to be a musical instrument. That is what learning an instrument is all about. I wish I had made this connection. It was made for me recently when I started to research the guitarist and guitar teacher Robert Fripp, and his notions of practice. Fripp—founder of King Crimson and famous for innovations such as frippertronics, soundscapes, and new standard tuning (NST)—quit the band at the height of its success, and on his wanderings became a music teacher. He founded Guitar Craft, based on NST and his own approach to music (Fripp, 2020). By his own admission, he was tone deaf, without any sense of rhythm, and left-handed, but given a right-handed guitar (Fripp, 2015), and so he set himself the task of making sense of things. He invented his own way of playing, and though he teaches 'his way', he makes it clear that the goal is to help you find your own. No wonder his music, particularly his soundscapes, spoke to me back in the 70s when nothing else did.

I was then, and remained curious about Fripp's practice, which he has documented in his forthcoming book *The Guitar Circle* (Fripp, 2020). I have found few other musicians or educators who took the time to focus on the mundane notions of practice as transformation, in a way that engaged me as special interests do, and speaks to the autistic's dislike of being redirected from their special interests at the behest of neurotypical parents and educators. For him, "Practice is a way of transforming the quality of our functioning. We move from making unnecessary efforts—the exertions of force—to making necessary efforts, the direction of effortlessness" (Fripp, 2020, p. 25). And concomitant with practice is attention:

The direction of attention is fundamental: little is

possible without attention. Relaxation is fundamental: little is possible when we are tense. In a relaxed state with our attention engaged, we begin to be sensitive to the needs of the moment. Work with attention is related to the cultivation of a sense of our personal presence, in a relaxed and alert condition. (Fripp, 2020, p. 23)

It is as if Fripp is describing the autistic person in their natural state, when they are untroubled by the external world. Perhaps autistics' special skills are well suited to practice—repetitive detailed activities—that our narrowly focused attention and intrinsic interests make possible. Though without taking the time to follow this up in all the research literature, I can only say that this is the case for me and autistics I have talked with.

When it comes to being an autistic living in a neurotypical world, however, it would seem as if the one thing we are not given is the opportunity to pay attention to and engage in the practices that interest us. Applied Behavioral Analysis (ABA) or Cognitive Behavioral Therapy CBT are the foundation of therapy for autistic children and adults in Ontario (Atwal, 2017) and cannot be extracted from any form of music therapy in that music therapy is seen by the autistic child as another adult intervention in their lives. When we talk about autistic children in any educational context, the first thing that comes to mind is how to control them and their actions. From therapy to restraints, autistics are policed into compliance, rewarded when they act normally or punished when they act abnormal. That is, they are rewarded when they act like 'normal' children and punished when they do not. They are punished for 'acting autistic'. There is no thought to what the autistic child might think is normal to them. There's little interest, or knowledge, of what the autistic child's goals and interests are, let alone needs.

When it comes to music and education, both become therapeutic interventions on and against the autistic child with the end goal of something along the continuum of reducing unwanted behaviors, normalizing the child's behaviors, teaching the child to perform neurotypicality, and rewarding the child's ability to act like everyone else. This continuum from low functioning to high functioning autistic behavior represents the bulk of the expectations for the child and the opportunities for the child to engage in music and education. Only the highest functioning autistic child reaches the point at which they are engaged in learning and creative activities on par with their typically developing peers.

Until this largely unattainable, almost mythical, location of performance as neurotypical is disrupted, autistic children are seen as in need of compensatory remediation or, as it is usually put, accommodation for their disability. The question comes down to this: do we settle for the status quo and continue to marginalize children because of the normative structures we have put in place to order and organize music education (and all institutional learning environments) to meet the goals, interests and needs of adults; or do we put aside these exclusionary barriers and practices that privilege the skills and abilities of the few children who can withstand the existing regimes of practice, competition and 'excellence', replacing them with more open-ended and inclusive environments for learning about the sensory modality of sound and embracing the diverse variety of musics that exist outside the confines of existing curriculum and pedagogy that makes up music education as we know it?

I recommend Kristine Barnett's *The Spark: A Mother's Story of Nurturing Genius* (2013) often to anyone interested in what I think is a meaningful example of how to look at autistic children, start to understand their goals, interests and needs, and consider how autistic children might be meaningfully accommodated in a manner that both benefits them and helps them find ways of successfully engaging with the world around them socially, and as well, most importantly, in terms of their special interests. Kristine's ability and willingness to observe her child, Jacob, and successfully encourage his interest in shapes and patterns, and her willingness to take a radically individualized approach to his learning enabled Jacob to find a place and community that worked for him—spectacularly so. By 15, he was working on his Ph.D. in theoretical physics at the Perimeter Institute in Waterloo (Wells, 2013). We are not all geniuses by a long shot, though I jokingly refer to myself as an idiot savant for my unique ability to think laterally across a myriad of seemingly unconnected ideas and domains of knowledge to come up with useful approaches to questions and problems. What I think happens with autistics who are encouraged or find themselves able to fully engage in their special—some call them obsessive—interests is that they bring their intrinsic interest and intrinsic motivation into focus. Anyone who is aware of their own intrinsic interest and intrinsic motivation, and is given the opportunity to explore them how and when they want to, will find themselves working to the best of their ability and accomplishing more than someone who is motivated by heteronomous force and situational interest in rewards, or punishments. Formal education largely succeeds when it

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is contiguous with intrinsic interest and motivation. It fails when it does not. Retention rates in music programs indicate this well, even if it is not acknowledged. And students who self-select out of formal music programs, even those with intrinsic interest and motivation towards sound and music, do so, I suggest, because of a failure of the situation to nurture those intrinsic elements, and both the student and the program lose much because of it.

Luckily for me, my intrinsic interest and motivation in creating sounds and music was greater than any situational challenges, and I have worked to create situations that foster what is important to me. That speaks, perhaps, more to my privilege of growing up in a society where there are multiple access points to exploring personal interests than it does to my enthusiasm for overcoming barriers to access; and that engaging my interests did not require 'permission' from an external authority, such as a music program or public approbation. Having left music to simmer in the background of my spare time for a few decades while I focused on building a career and sustaining full time employment, I reached a position where I was able to define and chart my own path… and it led back to sound and music almost four years ago. And since then I have built my own network of like-minded individuals interested in not just exploring sound and music, but learning with and about sound as a missing modality in most of our lives. I started teaching the creative arts course that took up music, drama and dance in the context of young children's learning, and I quickly worked to establish a program of research that brought my experience in formal and informal learning environments to focus on the missing modality of sound (rather than music per se) in children's learning environments. My long term goal is to develop tools that help young children explore this missing modality as a location of inquiry–that help them explore, build and test theories in increasing levels of complexity, as they do with physical and sensory objects they encounter in their lives.

My colleagues and I have a number of research and design projects, as well as educational and community focused knowledge mobilization activities in various stages of development. In our SSHRC funded project, *Sounding off: Learning, communicating and making sense with sound*, we are exploring sound as a missing modality in our educational system. We are starting with inquiry into the communities of practice that form around the Eurorack[1] form of electronic music; everything from the design and manufacture of Eurorack modules, the practices of various informal Eurorack community communities online, community groups such as Frequency Freaks and the Toronto Sound Festival, and interviews with a select members of this large and dispersed community who represent different facets of expertise in the use/creation of sound tools and technologies who have not had formal education in their use or creation.

Last year, my colleague and I published a book chapter, "Angry noise: Recomposing music pedagogies in indisciplinary modes" that was published in the *Handbook of Theory and Research in Cultural Studies and Education* (Thumlert & Nolan, 2019). The next year we followed up with a recasting of the ideas for a professional readership, calling it "Sound beginnings: Learning, communicating and making sense with sound" that is coming out this fall in *Music Educators Journal*. In both we took the foundational position of challenging the core beliefs of music education through the heuristic of equity, diversity and inclusion (EDI). My thinking is that any learning environment that is located in publicly funded educational institutions should be challenged any time it is not fully and meaningfully addressing a lack of EDI in the curriculum and pedagogy. Easier said than done, and much of what happens in our educational institutions fails on this point significantly. School itself, as it is organized under provincial laws and policies, fundamentally discriminates against the goals, interests and needs of children in a way that would never be tolerated in relation to adults. That is a very inconvenient truth, but one I think we need to remind ourselves every day. This is an issue that is particularly onerous when it comes to autistic individuals, but it impacts everyone. I point all my students to a short article published in 1975 by Chester Pierce and Gail Allen where they outline the concept of 'Childism':

> Childism is the automatic presumption of superiority of any adult over any child; it results in the adult's needs, desires, hopes and fears taking unquestioned precedence over those of the child…. We contend that childism is the basic form of oppression in our society and underlies all alienation and violence, for it teaches everyone how to be an oppressor and makes them focus on the exercise of raw power rather than on volitional humaneness. (pp. 15-16)

This is pretty heavy stuff. Some of my students blanch when we talk about Childism in the area of early childhood studies. Societal norms and the laws regarding early

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years care and education actually require us to place our needs over those of children. It is central to the profession. And music education does not escape this dichotomy, nor do any aspects of children's learning over which adults have purview. When a child is disabled by a society that is designed for adult notions of the standard or normal child, and when that child is seen to be in need of remediation or therapeutic intervention, then we are compounding the issue that all children face.

Autistic children, as well as those labeled ADHD or with oppositional defiant tendencies, can be seen, from this lens of Childism, as actively refusing to comply with the hegemonic norms and expectations that adults are trying to impose. We do not like it. It does not make sense. It is a violation of our own sense that we want to be doing what we are doing and not doing what some stranger tells us to do. Makes sense when you think of it. Seems normal to me. Why *would* any reasonable person wait for someone to tell you what to do and when to do it. I am not shocked when a child is non-compliant and more interested in engaging in activities they have an intrinsic interest in or intrinsic motivation to engage in. What *is* shocking is encountering a child that seems unaware of their intrinsic interest or intrinsic motivations and are ready to do whatever an external influence or force tells them to do. Perhaps there's a need for therapy to encourage an increase in oppositional defiant tendencies. This is not an anarchistic aside. When we think of Childism in the context of the world(s) we live in, it is clear that it is the responsibility of adults to control children's lives right down to a micro-management level, in many instances. It would be illegal not to do this. We must keep them safe from hurting themselves and others; keep them healthy and cared for.

John Locke wrote some interesting things about children and learning in *Some thoughts concerning education* (1690) that I think resonate with what I have been talking about:

> *[Children] must not be hindered from being children, or from playing or doing as children; but from doing ill. All other liberty is to be allowed them…. None of the things they are to learn should ever be made a burden to them, or imposed on them as a task. Whatever is so proposed, presently becomes irksome: the mind takes an aversion to it, though before it were a thing of delight or indifferency. Let a child be but ordered to whip his top at a certain time of the day, whether he has, or has not a mind to it; let this be but required of him as a duty, wherein he must spend so many hours morning and afternoon, and see whether he will not soon be weary of any play at this rate. (Locke, 1690, § 69-73)*

The typically developing compliant child who is always provided with diversions and amusements has the potential to never understand their intrinsic interests and motivations. As well, children with oppositional defiant tendencies who are policed and subject to therapeutic interventions likewise lose the opportunity to find their intrinsic interests and motivations. And we adults who have imposed these regimes of control will never benefit from the great potential in children that we ourselves have participated in the disruption of.

Yeah so? What do we do about that, Jason?

Obviously, by now, it's clear that I have been thinking a lot about approaches to supporting children's learning from a number of perspectives. The triple lens of equity, diversity and inclusion still resonates with me, largely for the open-endedness of its ability to afford unknowable outcomes—for educators, students and children. EDI requires us to continuously chip at the hegemony of childism where we can, even while we are also continuously forced to make choices for children, with or without their consent due to the social and legal responsibilities we have regarding children. The ethical questions that confront us when we are actively researching children pertaining to their inability to give informed consent (under the age of eighteen in most jurisdictions I'm aware of) are dealt with by the notion of assent. Assent, in my understanding, represents an agreement on the part of the child, or anyone deemed unable to provide informed consent, that they understand what they are participating in to the best of their ability. Assent can be given or withdrawn by a child at any point in the research process, sometimes based on the observation of their attention or their movement away from the location of research. I see this as a most ethical approach to dealing with children and learning. And, all things considered, it may be the best way of balancing social and legal responsibilities for child care with the rights of children themselves. In order to put this thinking into practical operation, we have to consider the pedagogical possibilities, and pay more attention to the affordances of music and sound learning materials themselves, and look to building new curricular materials that move us in new directions.

Working from the ten points outlined in "Angry noise: Recomposing music pedagogies in indisciplinary modes" (Thumlert & Nolan, 2019), I will try to describe the opportunities and challenges that position sound and music learning as fundamental aspects of sensory learning in the early years and beyond, based on the principles of equity, diversity and inclusion. We start, of course, with (re)viewing students as individual people with their own rights, goals, interests and needs that should take priority over our own. What might be inconvenient for the teacher or the classroom as a whole may be what is good for the children themselves. However, from the perspective of this particular autistic educator, creating a safe and meaningful learning environment for myself has turned out to be a space that others gravitated toward in their search for curious and open-ended experiences. The choice of where children want to learn and who they want to learn with seems like a wild extravagant fancy, but we can always work in the

From the perspective of this particular autistic educator, creating a safe and meaningful learning environment for myself has turned out to be a space that others gravitated toward in their search for curious and open-ended experiences.

hopes of achieving some small movement in this direction, even when we are required to enforce top-down policies.

To start, we must *start* with ourselves and our practice—serious questions that cannot be easily answered, if at all—about whose needs are being met by our actions and the choices we make. Are we meeting the needs of the children we work with or are they meant for some abstracted notion of children's needs and then applied *on* the children we work with. Are our notions of children abstract and idealized, coming from social norms or our own hylomorphic imaginings? Do we adopt notions that are convenient and easy for us? Professionally speaking we have to actively critique our own biases and assumptions about what we are doing within the context of what is required for us to do and what is best for the children in front of us based on our careful observation of their goals, interests and needs. How valid are the notions of technique, performance and competitive excellence and testing, let alone our musical tastes in terms of the lived experience of these children? Putting them aside, can we instead find ways of nurturing children to develop a meaningful relationship with sound and music based on their own interests and curiosities as they develop?

When it comes to ourselves, I think we have to start with disrupting our own ideas about what is beautiful or good, or even proper when it comes to sound and music. I make a habit of avoiding my own music and musical tastes as much as possible around learners, encouraging them to explore their own. We also have to challenge both cultural imperialism *and* cultural tourism. By that, I mean the putting aside the assumption that Eurocentric music, melodies, rhythms, scales, and even instruments hold some value over and above others in the 'majority world' (the parts of the world where most of the people live), and also avoiding patronizing superficial inclusion of Black or Indigenous music before returning to 'more serious' music.

Perhaps we need to put music aside to first explore sound and sound-making materials, then learn what the materials themselves are capable of—the sounds, textures, dynamics—and beyond traditional rhythms and tonalities, before looking to rhythms, melodies and harmonies that can emerge from the explorations. We do not need to start with the rules of do-re-mi in militaristic 4/4 time. If you watch children exploring pitch and rhythm, I doubt that you would ever see them suddenly rush into a major scale in the key of C, unless they have already been inculcated into a social norm.

Exploring the modality of sound, and its expression in music, is a physical, full-bodied, multi-sensory exploration. And it is located in the bodies of children; how they move and interact with the world around them. Children are scientists of their sonic spaces. And it's mostly physics: creating and redirecting sound waves through the motion and redirection of motion of physical objects. The idea of children as scientists of their own world is something an educator can work with at any level. Encouraging the exploration yourself may be necessary at the start due to societal prohibitions on children making noise and openly exploring new sonic avenues. Some children, sadly enough, have to be taught how to play in the mud. With the realization that we do have to keep them safe from hurting themselves and others, we can let them engage in open-ended inquiry through theory building, testing and reflection, in increasing levels of complexity that is the hallmark of self-directed learning. And through this valuing of exploration and the encouragement of process-oriented inquiry skills, we have shifted away from the performance of prescriptive skills designed to meet a set of cultural expectations that may never have any value to them and their lives.

The teacher/educator, as guide-on-the-side and just-in-time resource, is in a place to help them develop more nuanced understandings of the affordances of the sonic materials children are using, without actually having to have any expertise in their use. How do you become an expert on hitting a fence with a stick, or making popping noises with found objects? You are supporting learning through experimentation and improvisation, making and doing. And if you are also participating in the exploration yourself, there is no reason why you can not enjoy syncopating the rhythms around you… or even polyrhythms. The children will no doubt develop their own artistic goals, making and sharing the musics they invent, especially because the soundworks/music creation is something immediate and pleasurable to them, even if it is just for the joy of moving and creating sounds.

In typical autistic fashion, I am done. No need to attempt to guide your thinking with a concluding recapitulation of the salient points, and exhortations to future actions. Very much like the music I compose for myself, I started on my topic, convoluted myself there and back again with a modicum of coherence (at least to me), and I am done. Ready to go on to something else. Though when I am engaged in improvising music with whatever tools are at hand, I usually realize after I am done, that I forgot to press record, and the whole thing is lost, but for echoes. And that music is always the best.

Notes

[1] The Eurorack synthesizer format was established by Doepfer in the mid-90s, and is presently the most popular format with over 9700 different modules presently available from companies such as Moog and Roland, to boutique manufacturers such as Mutable Instruments, Make Noise and Intellijel to cottage-industry products & DIY kits. The standard module size, power supply, use of 3.5mm jacks and allows for interoperability regardless of who produces which part of the overall 'rack' allowing for infinite combinations of sound creating and processing possibilities. https://en.wikipedia.org/wiki/Eurorack

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